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## Professional Competencies in Intensive Care and Emergency Medicine at the Faustino Pérez Provincial Clinical Surgical Teaching Hospital

### *Competencias profesionales en Medicina Intensiva y Emergencias en Hospital Provincial Clínico Quirúrgico Docente Faustino Pérez*

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#### ABSTRACT

The article addresses the urgent need to develop comprehensive professional competencies in the training of specialists in Intensive Care and Emergency Medicine. It highlights that, beyond theoretical knowledge, it is essential to foster practical skills, management, leadership, communication, and ethics in high-pressure environments. It proposes implementing a contextualized didactic strategy that integrates continuous assessment, simulation, and reflection, placing the resident at the center of their learning. The research objective is to substantiate the need for a competency-based training strategy to enhance the quality and safety of critical care, ensuring holistically prepared professionals.

#### RESUMEN

El artículo aborda la necesidad de potenciar el desarrollo de competencias profesionales integrales en la formación de especialistas en Medicina Intensiva y Emergencias. Destaca que, más allá del conocimiento teórico, es esencial fomentar habilidades prácticas, gestión, liderazgo, comunicación y ética en entornos de alta presión. Propone implementar una estrategia didáctica contextualizada que integre evaluación continua, simulación y reflexión, colocando al residente como protagonista de su aprendizaje. El objetivo es fundamentar la necesidad de una estrategia formativa basada en competencias para elevar la calidad y seguridad en la atención crítica, garantizando profesionales holísticamente preparados

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The history of medicine is, in essence, the relentless pursuit of quality in patient care. From the ancient Code of Hammurabi, which already established consequences for malpractice, to modern and complex systems of accreditation and clinical auditing, the guiding principle has remained constant: to offer the best to those who suffer. <sup>(1)</sup>

This ethical imperative, however, has substantially shifted its focus. While it once resided predominantly in the virtue and knowledge of the individual medical act, today it is unequivocally understood as the systemic result of an indissoluble triad: a robust healthcare structure, an organizational culture of safety and continuous improvement, and, fundamentally, rigorous, relevant, and profoundly humanistic professional training. <sup>(2,3)</sup> The authors consider this paradigm shift crucial; clinical excellence can no longer be attributed solely to individual genius, but must be deliberately cultivated by the training system.

In a world of increasing clinical complexity, characterized by multisystemic pathologies, rapidly evolving invasive technology, and, paradoxically, often limited material and human resources, achieving "the best" for the patient depends, more than ever, on the comprehensive and robust training of our specialists. It is no longer sufficient, nor ethically acceptable, for a professional to simply possess knowledge; reality demands one who knows how to act with skill and precision, who knows how to be empathetic, resilient, and ethically sound, and who knows how to manage efficiently and with leadership amidst the daily storm of critical care. <sup>(4)</sup>

This demand is exponentially amplified and takes on an absolute urgency in frontier areas such as Intensive Care and Emergency Medicine. This field constitutes a unique ecosystem where decisions are made in seconds, where the margin of error is reduced to virtually zero, and where the consequences of each action are immediate and, all too often, life-threatening for the patient. <sup>(5,6)</sup> It is here that the gap between "knowing" and "comprehensively knowing how to do" can have an irreparable human cost.

This article aims to substantiate, from a theoretical and practical perspective, the need to promote the development and implementation of an explicit, contextualized, and competency-based didactic strategy for the training of specialists in Intensive Care and Emergency Medicine.

It seeks to argue that such a strategy is the indispensable bridge to overcome the gaps in contemporary critical care practice, transforming "on-the-job learning" into an intentional, systematic,

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and evaluable process that guarantees the graduation of holistically competent professionals.

### **The Cuban Model of Work-Based Education: Strengths and Challenges in High-Risk Specialization**

Cuban medical training, with its deeply rooted and distinctive principle of Work-Based Education, has a clear and lofty social mission: to graduate competent, ethical professionals committed to their people and with a profound humanistic sense. <sup>(7)</sup> This pioneering and internationally recognized model integrates the classroom with real-world practice settings from the early years of the program, aiming for meaningful and contextualized learning. <sup>(8)</sup> Its value in the training of general practitioners is unquestionable.

However, the authors observe that in postgraduate specialization, and particularly in high-pressure and complex specialties such as Intensive Care and Emergency Medicine, this model can face significant strain. Idealized theory and practice sometimes clash head-on with an accelerated clinical reality, fragmented by the overload of services and frequently consumed by the urgency of saving lives. <sup>(9)</sup> In this environment, the time and mental space for guided pedagogical reflection can be relegated, risking the reduction of training to a succession of reactive experiences. <sup>(10)</sup>

In specific teaching settings, such as the "Faustino Pérez" Provincial Clinical Surgical Teaching Hospital and other referral centers, local research and the experience of tutors have identified a worrying and recurring gap: the insufficient and asymmetrical development of comprehensive professional competencies in Intensive Care and Emergency Medicine residents. Rotations through intensive care units and emergency departments, while intensive in clinical and technical exposure, can become a fleeting and reactive process if not supported by an explicit teaching strategy.

Such a strategy must be designed with the precise intention of consciously, systematically, and measurably developing not only technical skills or theoretical knowledge (which usually receive more attention), but also critical dimensions such as: managerial capacity to optimize scarce resources, sound clinical-epidemiological thinking for decision-making under uncertainty, crisis leadership to coordinate multidisciplinary teams under stress, and the essential attitudes for interdisciplinary teamwork and for effective, honest, and compassionate communication in critical situations with patients and devastated families. <sup>(11,12,13)</sup>

The authors suggest that it is in these "soft" but crucial dimensions where the greatest vulnerability of the current training model lies when applied without intentional pedagogical mediation.

### **Professional Competence in Intensive Care and Emergency Medicine: A Multidimensional Mosaic Beyond Knowledge**

What, then, do we understand by professional competence in this specific context? Far from being a univocal concept or a list of procedures, it reveals itself as a complex, dynamic, and contextual mosaic. <sup>(14,15)</sup> It undoubtedly integrates up-to-date scientific knowledge and cutting-edge technical and clinical skills, which constitute its indispensable foundation. But its essence lies precisely in going beyond this core. It encompasses the ability to manage scarce human and material resources with a sense of priority and efficiency, to lead and coordinate a multidisciplinary team under extreme pressure while maintaining calm and clarity, to conduct research to improve one's own practice and generate new knowledge from clinical experience, and to teach and guide new generations, thus perpetuating a cycle of excellence. <sup>(16)</sup>

A competent intensivist or emergency physician is, ultimately, one who can synthesize these seemingly disparate dimensions into a single, coherent, and effective professional act. This is someone who can interpret a hemodynamic curve on a monitor, simultaneously make a distressing ethical decision in consultation with the family, mentally organize the flow and resources of their unit for the next shift, and then, in a moment of pause, critically reflect on the process and the outcome to extract profound lessons. <sup>(17)</sup>

The authors have questioned the need to contextualize the programs given the urgency of rotations and the absence of other areas (Imaging and the Emergency Intensive Care Unit). The new program, published in November 2025, reveals a positive change in terms of the comprehensive training of residents because it addresses the gaps identified in articles published by specialists at the national level, which is gratifying for all professionals involved in the training process. <sup>(18)</sup>

### **Global and National Frameworks: A Solid Starting Point**

Fortunately, addressing this challenge does not begin from scratch. Globally, there has been extensive reflection and a consolidated line of research on competency-based training in critical care medicine for decades. Seminal projects such as the European CoBaTrICE (Competency-Based Training in Intensive Care Medicine in Europe)

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and the detailed recommendations of the Multisociety Task Force in the United States have dedicated years to mapping these essential competencies, seeking to standardize and, above all, raise training standards to guarantee safe and high-quality care regardless of geographical boundaries. <sup>(19)</sup> These frameworks provide valuable taxonomies and implementation experiences that can be adapted.

In the Cuban context, fundamental institutional efforts, such as those led by the National School of Public Health and the work of the National Commission on Competence and Performance, have laid important theoretical and methodological foundations. <sup>(20)</sup> They have successfully identified and defined generic and specific competencies for various specialties, aligning with the vision of a more comprehensive professional profile. <sup>(2)</sup> The authors recognize and value these conceptual advances as indispensable intellectual capital.

### **Proposal for a Contextualized Didactic Strategy**

The current challenge, where the real difficulty lies, is effective implementation. It involves bringing this robust theoretical framework to the concrete and chaotic daily life of the resident in training, to the bedside of the critically ill patient, to the unpredictable dynamics of the emergency room. <sup>(12)</sup> It means translating the documents, definitions, and competency lists into daily teaching actions, into viable formative assessment tools, into mentoring that transcends occasional technical supervision to become a guide for comprehensive development. <sup>(4)</sup>

It is here that the proposal for a specific, contextualized, and flexible teaching strategy ceases to be a mere academic exercise and becomes an urgent practical necessity. The authors believe that this strategy should not be conceived as a rigid constraint that imposes a single, stifling model. On the contrary, it should function as a compass and a framework that organizes, enhances, and, above all, gives pedagogical purpose to the already existing and valuable "on-the-job learning." <sup>(8)</sup> Its design must begin with a real and participatory diagnosis of the gaps in the local context, not with the aim of assigning blame, but with the purpose of identifying concrete opportunities for improvement. <sup>(11)</sup>

This strategy must plan sequential and coherent actions that comprehensively address all facets of competence:

**1) Clinical Care Facet:** The core of knowledge and technical skills, but focused on their reasoned clinical application.

**2) Managerial Aspects:** Traditionally neglected, this includes managing beds, resources, staff, and time under stressful conditions.

**3) Teaching Aspects:** Skills for teaching peers, medical students, and nursing staff, while consolidating one's own knowledge.

**4) Research Aspects:** Fostering critical curiosity and basic skills for clinical research or process improvement.

Finally, and this is a fundamental pillar, it must incorporate mechanisms for continuous and formative assessment. These mechanisms, which go beyond theoretical exams or procedural checklists, should allow for visualizing and measuring the progressive transition from the resident's "current state" to the "desired state" defined by the graduate profile of an excellent specialist. <sup>(15)</sup> Assessment should be a learning tool in itself, with constant and constructive feedback. <sup>(10)</sup>

### **Pillars for Effective Implementation: Dialectics, Technology, and Humanism**

To be effective, this strategy must be dialectical and adaptable to the changing circumstances of healthcare, which are the norm, not the exception, in Intensive Care and Emergency Medicine. <sup>(6)</sup> It must place the resident at the center of the process, not as a passive recipient of information, but as an active, autonomous learner, co-responsible for their own growth. <sup>(14)</sup>

The authors consider it essential to intelligently leverage tools such as information technologies and highly realistic simulation. Simulated scenarios allow for the training of complex procedures, critical decision-making, and communication and leadership skills in controlled and safe environments, where mistakes are a source of learning, not a tragedy. <sup>(13)</sup>

Likewise, the strategy must systematically encourage reflection after action, critical analysis of real cases (morbidity and mortality), and immediate and delayed constructive feedback. <sup>(9)</sup> And, above all, it must synergistically integrate all actors in the educational process: the professor-tutor as a guide, role model, and facilitator; the unit's staff (physicians, nurses, technicians) as a genuine community of practice that welcomes and teaches; and the resident themselves as the primary manager of their own development. <sup>(17)</sup>

The scientific novelty—and at the same time, the purest common sense—of this approach lies precisely in understanding that

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excellence in intensive care and emergency response is not an inherited gift, nor a skill acquired by osmosis or by simply accumulating hours in a rushed rotation. <sup>(1)</sup> The authors firmly maintain that this is a misconception and potentially harmful.

Excellence in such a demanding discipline is built. It is built brick by brick, with deliberate pedagogical intent, with an explicit curriculum design that makes visible what must be learned, with formative assessment that guides the path, and with constant human support that provides both assistance and challenge in just the right measure.<sup>(4)</sup> Ultimately, training the intensivist and emergency physician of the 21st century means equipping them with the cognitive, technical, emotional, and ethical tools to navigate uncertainty with confidence, to manage systemic complexity, and, at the very heart of the technological storm and the dizzying pace of care, to never lose sight, not for a single moment, of the profound humanism that gave rise to and ultimately defines our profession. <sup>(20)</sup>

Investing resources, time, and intellectual effort in this comprehensive competency-based training is not a dispensable expense or a luxury in a healthcare system that is constantly evolving and faces new challenges every day. On the contrary, the authors consider it the most strategic, profitable, and ethical investment possible. It is a direct investment in the quality of training for specialists in Intensive Care and Emergency Medicine. <sup>(18)</sup>

At the end of the day, as our oldest and wisest role models, from Hippocrates to the masters of Cuban medicine, have pointed out, it is simply a matter of upholding the fundamental promise: to seek the best for the patient based on the training of the professionals responsible for their care. And the best, in today's complex and challenging world, comes from a professional who is not only well-informed or technically skilled, but truly and holistically competent. A professional trained intentionally, for complexity, with and for humanism. That must be the essential goal of training in Intensive Care and Emergency Medicine.

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